



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-------------------------------|---------------------|------------------|
| 10/719,579 | 11/21/2003 | Kenneth Edward Anthony Omersa | THOM-0029 | 3246 |
| 23377 | 7590 | 03/13/2007 | EXAMINER | |
| WOODCOCK WASHBURN LLP | | | HODGE, ROBERT W | |
| CIRA CENTRE, 12TH FLOOR | | | ART UNIT | PAPER NUMBER |
| 2929 ARCH STREET | | | 1745 | |
| PHILADELPHIA, PA 19104-2891 | | | | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 03/13/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | |
|------------------------------|--------------------------|--------------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/719,579 | OMERSA, KENNETH EDWARD ANTHONY |
| | Examiner Robert Hodge | Art Unit 1745 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 February 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-73 is/are pending in the application.
 - 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5,8-10,13,14,21,23,25,30,33,65-68,71 and 73 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 November 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/2/04 & 6/1/05</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 6,7,11,12,15-20,22,24,26-29,31,32,34-64,69,70 and 72.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-5, 8, 10, 13, 14, 21, 23, 25, 30, 33, 65-68, 71 and 73 in the reply filed on 2/7/07 is acknowledged. Additionally the Examiner rejoins claim 9 because it is also within the scope of the elected species especially when claim 13 is considered. The Examiner notes that claims 25, 30 and 33 depend on claim 15, which has been withdrawn from consideration. Claim 15 is drawn to the interconnect embodiment which is non-elected. Claims 25, 30 and 33 will be examined only in as much as the member is concerned not the interconnect and the same applies to claims 65 and 73.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United Kingdom on 11/21/2002. It is noted, however, that applicant has not filed a certified copy of the GB0227180.7 application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 2/2/04 & 6/1/05 were filed before the mailing of the first non-final office action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8, 9, 13, 14, 21, 23, 25, 30, 33, 65-67, 71 and 73 rejected under 35 U.S.C. 102(b) as being anticipated by EP 1225648 hereinafter Shibata.

Shibata teaches a solid oxide ceramic fuel cell comprising a non-polymeric electrolyte, a plurality of thin film adhering cathode layers (i.e. foil and is a structural member) made of titanium (non-alloyed) which are non uniformly dense (i.e. having porous and non-porous regions), wherein a porous and electrically collecting cathode layer is formed on the cathode layer which can comprise titanium or ceramic material and said cathode layer indirectly supports the electrolyte (figure 2 and paragraphs, [0032], [0038], [0039], [0047], [0048] and [0063]). The Examiner notes that no patentable weight has been given to the product-by-process limitations in claims 21 and 23 as to how the porous region is formed as well as the product-by-process limitation found in claim 25 as to how the member is formed, see MPEP 2113 and because the final product has been found in the prior art it reads on the claims as so recited.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1745

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5, 10 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata in view of U.S. Pre-Grant Publication No. 2002/0048699 hereinafter Steele.

Shibata as discussed above is incorporated herein. Shibata further teaches that the solid electrolyte layer is not limited to the materials listed in the disclosure (paragraph [0039]).

Shibata does not teach that the porous region is bounded by the non-porous region or that the electrolyte is cerium gadolinium oxide.

Steele teaches a solid oxide fuel cell comprising a ferritic stainless steel substrate comprising titanium having a porous region bounded by a non porous region, with an electrolyte coating of cerium gadolinium oxide located thereon (paragraphs [0012], [0014], [0065] and [0066]).

At the time of the invention it would have been obvious to one having ordinary skill in the art to include cerium gadolinium oxide as the electrolyte and for the porous region to be bound by the non-porous region in Shibata as taught by Steele in order to

match the thermal expansion of the different layers with one another so that they don't separate from each other and to effectively seal the fuel cells so that the reactants don't leak from the fuel cells thus preventing an explosion hazard.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH

JONATHAN CREPEAU
PRIMARY EXAMINER